

AP Precalculus

Glossary · · every term in the course, A–Z

English	Pinyin
 amplitude <i>/ˈæmplɪtjuːd/</i>	zhèn fú
arc <i>/ɑːk/</i>	hú
 arcsine <i>/ˈɑːksəm/</i>	fǎn zhèng xián
area <i>/ˈeəriə/</i>	miàn jī
 arithmetic sequence <i>/əˈrɪθmətɪk ˈsiːkwəns/</i>	děng chā shù liè
 assumptions <i>/əˈsʌmpʃnz/</i>	jiǎ shè
 asymptote <i>/ˈæsɪmptəʊt/</i>	jiàn jìn xiàn
 average rate of change <i>/ˈævərɪdʒ reɪt ɒv tʃeɪndʒ/</i>	píng jūn biàn huà lǜ
away from	yuǎn lí
axes <i>/ˈæksɪz/</i>	zhóu
 base <i>/beɪs/</i>	dǐ shù
centre <i>/ˈsentə/</i>	yuán xīn
change in tandem	xié tóng biàn huà
 change-of-base <i>/tʃeɪndʒ ɒv beɪs/</i>	huàn dǐ
circle <i>/ˈsɜːkl/</i>	yuán
cofunction	yú hán shù
columns	liè
 common difference <i>/ˈkɒmən ˈdɪfrəns/</i>	gōng chāi
 common log <i>/ˈkɒmən lɒɡ/</i>	cháng yòng duì shù

English	Pinyin
 common logarithm <i>/ˈkɒmən ˈlɒɡərɪθəm/</i>	cháng yòng duì shù
$\div$ common ratio <i>/ˈkɒmən ˈreɪʃiə/</i>	gōng bǐ
complete the square <i>/kəmˈpli:t ðə skweə/</i>	pèi fāng fǎ
completing the square <i>/kəmˈpli:tɪŋ ðə skweə/</i>	pèi fāng fǎ
 complex <i>/ˈkɒmpleks/</i>	fù shù
 complex number <i>/ˈkɒmpleks ˈnʌmbə/</i>	fù shù
 component form <i>/kəmˈpəʊnənt fɔ:m/</i>	fèn liàng xíng shì
compose	fù hé
 composite function <i>/ˈkɒmpəzɪt ˈfʌŋkʃn/</i>	fù hé hán shù
 composition <i>/ˌkɒmpəˈzɪʃn/</i>	fù hé
 concave down <i>/kɒnˈkeɪv daʊn/</i>	tū
 concave up <i>/kɒnˈkeɪv ʌp/</i>	āo
 concavity <i>/kənˈkævɪti/</i>	āo tū xìng
 conic section <i>/ˈkɒnɪk ˈseksʃn/</i>	yuán zhuī qū xiàn
 conjugate <i>/ˈkɒndʒuːgeɪt/</i>	gòng è
 conjugate pairs <i>/ˈkɒndʒuːgeɪt peəz/</i>	gòng è duì
 constant <i>/ˈkɒnstənt/</i>	cháng shù
context <i>/ˈkɒntekst/</i>	qíng jìng
 cosecant <i>/ˈkəʊsekənt/</i>	yú gē
 cosine <i>/ˈkəʊsaɪn/</i>	yú xián

English	Pinyin
 cotangent <i>/ˈkəʊtændʒənt/</i>	yú qiē
coterminal	zhōng biān xiāng tóng de
counterclockwise	nì shí zhēn
cross-section <i>/krɒs ˈseksən/</i>	héng jié miàn
 cycle <i>/ˈsaɪkl/</i>	xún huán
data points	shù jù diǎn
 decay factor <i>/diˈkeɪ ˈfæktə/</i>	shuāi jiǎn yīn zi
decompose	fēn jiě
 decreasing <i>/ˈdiːkriːsɪŋ/</i>	dì jiǎn
 degree <i>/diˈɡriː/</i>	cì shù
degrees <i>/diˈɡriːz/</i>	dù
 denominator <i>/diˈnɒmɪneɪtə/</i>	fēn mǔ
 dependent variable <i>/diˈpendənt ˈveəriəbl/</i>	yīn biàn liàng
 determinant <i>/diˈtɜːmɪnənt/</i>	háng liè shì
 dilation <i>/daɪˈleɪʃn/</i>	shēn suō
dimensions	wéi shù
direction <i>/daɪˈrekʃn/</i>	fāng xiàng
displacement <i>/diˈsplɛsmənt/</i>	wèi yí
 domain <i>/dəˈmeɪn/</i>	dìng yì yù
domain restriction	dìng yì yù xiàn zhì
 double-angle <i>/ˈdʌbl ˈæŋɡl/</i>	èr bèi jiǎo

English	Pinyin
double-angle identities	bèi jiǎo héng děng shì
eliminating	xiāo qù
 Ellipse <i>/rˈlɪps/</i>	tuǒ yuán
 end behavior <i>/end bɪˈheɪvjə/</i>	mò duān xíng wéi
 equilateral triangle <i>/,ɪˌkwɪˈlætərəl ˈtraɪæŋɡl/</i>	děng biān sān jiǎo xíng
 equivalent <i>/rˈkwɪvələnt/</i>	děng jià
 even <i>/ˈiːvən/</i>	ǒu hán shù
even-odd	jī ǒu
expanding <i>/ekˈspændɪŋ/</i>	zhǎn kāi
 explicit <i>/ekˈsplɪsɪt/</i>	xiǎn shì
 exponential <i>/,ekspəˈnenʃl/</i>	zhǐ shù
 exponential decay <i>/,ekspəˈnenʃl dɪˈkeɪ/</i>	zhǐ shù shuāi jiǎn
 exponential equation <i>/,ekspəˈnenʃl rˈkweɪʒn/</i>	zhǐ shù fāng chéng
 exponential function <i>/,ekspəˈnenʃl ˈfʌŋkʃn/</i>	zhǐ shù hán shù
 exponential growth <i>/,ekspəˈnenʃl grəʊθ/</i>	zhǐ shù zēng zhǎng
 exponential model <i>/,ekspəˈnenʃl ˈmɒdl/</i>	zhǐ shù mó xíng
 exponential regression <i>/,ekspəˈnenʃl rɪˈɡreʃn/</i>	zhǐ shù huí guī
 extraneous <i>/ekˈstreɪniəs/</i>	zēng gēn
 extrapolation <i>/ekˈstræpəleɪʃn/</i>	wài tuī
 factored form <i>/ˈfæktəd fɔːm/</i>	yīn shì fēn jiě xíng shì
 factoring <i>/ˈfæktərɪŋ/</i>	yīn shì fēn jiě

English	Pinyin
first difference	yī jiē chā fēn
force <i>/fɔ:s/</i>	lì
 frequency <i>/'fri:kwənsi/</i>	pín lǜ
 function <i>/'fʌŋkʃn/</i>	hán shù
Fundamental Theorem of Algebra	dài shù jī běn dìng lǐ
 geometric sequence <i>/,dʒi:əv'metrik 'si:kwəns/</i>	děng bǐ shù liè
Geometrically	jǐ hé dì
 global (absolute) maximum <i>/'gləʊbl 'mæksɪmə/</i>	quán jú zuì dà zhí
 growth factor <i>/grəʊθ 'fæktə/</i>	zēng zhǎng yīn zi
 hole <i>/həʊl/</i>	kōng xīn
horizontal <i>/,hɒrɪ'zɒntl/</i>	shuǐ píng
— horizontal asymptote <i>/,hɒrɪ'zɒntl 'æsɪmptəʊt/</i>	shuǐ píng jiàn jìn xiàn
horizontal shift	shuǐ píng píng yí
horizontal stretch	shuǐ píng shēn suō
horizontal translations	shuǐ píng píng yí
 Hyperbola <i>/haɪ'pɜ:bələ/</i>	shuāng qū xiàn
 identity function <i>/aɪ'dentɪti 'fʌŋkʃn/</i>	héng děng hán shù
 identity matrix <i>/aɪ'dentɪti 'meɪtrɪks/</i>	dān wèi jǔ zhèn
image <i>/'ɪmɪdʒ/</i>	xiàng
imaginary unit	xū shù dān wèi

English	Pinyin
 implicit <i>/ɪmˈplɪsɪt/</i>	yǐn shì
 implicitly defined <i>/ɪmˈplɪsɪtli dɪˈfaɪnd/</i>	yǐn shì dìng yì
increases	zēng dà
 increasing <i>/ɪnˈkriːsɪŋ/</i>	dì zēng
 independent variable <i>/,ɪndɪˈpendənt ˈveəriəbl/</i>	zì biàn liàng
inequality <i>/ɪniːˈkwɒlɪti/</i>	bù děng shì
infinity <i>/ɪnˈfɪnɪti/</i>	wú qióng
 initial value <i>/ɪˈnɪʃl ˈvæljuː/</i>	chū shǐ zhí
 input <i>/ˈɪnpʊt/</i>	shū rù
instantaneous rate of change <i>/,ɪnstənˈteɪniəs reɪt ɒv tʃeɪndʒ/</i>	shùn shí biàn huà lǜ
intercept <i>/,ɪntəˈsept/</i>	jié jù
 inverse <i>/ɪnˈvɜːs/</i>	fǎn hán shù
inverse cosine	fǎn yú xián
 inverse function <i>/ɪnˈvɜːs ˈfʌŋkʃn/</i>	fǎn hán shù
 inverse matrix <i>/ɪnˈvɜːs ˈmeɪtrɪks/</i>	nì jǔ zhèn
inverse sine	fǎn zhèng xián
inverse tangent <i>/ɪnˈvɜːs ˈtændʒənt/</i>	fǎn zhèng qiè
inverse transformation	nì biàn huàn
 inverse trigonometric functions <i>/ɪnˈvɜːs ˌtrɪɡənəʊˈmetrɪk ˈfʌŋkʃnz/</i>	fǎn sān jiǎo hán shù
 invertible <i>/ɪnˈvɜːtɪbl/</i>	kě nì

English	Pinyin
 leading coefficient <i>/ˈliːdɪŋ ˌkəʊɪˈfɪʃənt/</i>	shǒu xiàng xì shù
 leading term <i>/ˈliːdɪŋ tɜːm/</i> limaçon	shǒu xiàng hān xiàn
limit notation	jí xiàn jì hào
 linear <i>/ˈliːniə/</i>	xiàn xìng
 linear function <i>/ˈliːniə ˈfʌŋkʃn/</i>	xiàn xìng hán shù
 linear model <i>/ˈliːniə ˈmɒdl/</i>	xiàn xìng mó xíng
 linear transformation <i>/ˈliːniə trænsfɔːˈmeɪʃn/</i>	xiàn xìng biàn huàn
 local (relative) extremum <i>/ˈləʊkl ekˈstreməm/</i>	jú bù jí zhí
 logarithm <i>/ˈlɒɡərɪθəm/</i>	duì shù
 logarithmic equation <i>/ˌlɒɡəˈrɪθmɪk ɪˈkweɪʒn/</i>	duì shù fāng chéng
 logarithmic function <i>/ˌlɒɡəˈrɪθmɪk ˈfʌŋkʃn/</i>	duì shù hán shù
 logarithmic model <i>/ˌlɒɡəˈrɪθmɪk ˈmɒdl/</i> logarithmic regression	duì shù mó xíng duì shù huí guī
 logarithmic scale <i>/ˌlɒɡəˈrɪθmɪk skeɪl/</i> long-run	duì shù kè dù cháng qī
 magnitude <i>/ˈmæɡnɪtjuːd/</i> mapping	dà xiǎo yìng shè
 matrix <i>/ˈmeɪtrɪks/</i>	jǔ zhèn
 matrix multiplication <i>/ˈmeɪtrɪks ˌmʌltɪplɪˈkeɪʃn/</i>	jǔ zhèn chéng fǎ

English	Pinyin
matrix transformation	jǔ zhèn biàn huàn
maximum <i>/ˈmæksɪmə/</i>	zuì dà zhí
— midline <i>/ˈmɪdlaɪn/</i>	zhōng xiàn
minimum <i>/ˈmɪnɪmə/</i>	zuì xiǎo zhí
 model <i>/ˈmɒdl/</i>	mó xíng
modeling <i>/ˈmɒdəlɪŋ/</i>	jiàn mó
motion <i>/ˈməʊʃn/</i>	yùn dòng
# multiplicity <i>/ˌmʌltɪˈplɪsɪti/</i>	chóng shù
 natural base <i>/ˈnætʃərəl beɪs/</i>	zì rán dǐ shù
 natural log <i>/ˈnætʃərəl lɒɡ/</i>	zì rán duì shù
 natural logarithm <i>/ˈnætʃərəl ˈlɒɡərɪθəm/</i>	zì rán duì shù
next state	xià yī zhuàng tài
not commutative	bù kě jiāo huàn
^ numerator <i>/ˈnjuːməreɪtə/</i>	fēn zǐ
* odd <i>/ɒd/</i>	jī hán shù
 one-to-one <i>/wʌn tuː wʌn/</i>	yī yī duì yìng
 oscillate <i>/ˈɒsɪleɪt/</i>	zhèn dòng
 output <i>/ˈaʊtpʊt/</i>	shū chū
 parabola <i>/pəˈræbələ/</i>	pāo wù xiàn
() parameter <i>/pəˈræmɪtə/</i>	cān shù
parameter interval	cān shù qū jiān

English	Pinyin
 parametric equations <i>/ˌpærə'metrik i'kweɪzɪnz/</i>	cān shù fāng chéng
 parametric function <i>/ˌpærə'metrik 'fʌŋkʃn/</i>	cān shù fāng chéng hán shù
parametrization	cān shù huà
parent function	jī běn hán shù
path <i>/pæθ/</i>	lù jìng
 period <i>/'piəriəd/</i>	zhōu qī
 periodic <i>/ˌpiəri'ɒdɪk/</i>	zhōu qī de
 phase shift <i>/feɪz ʃɪft/</i>	xiàng wèi píng yí
 piecewise-defined function <i>/'pi:swaɪz dɪ'faɪnd 'fʌŋkʃn/</i>	fēn duàn hán shù
plane <i>/pleɪn/</i>	píng miàn
plot <i>/plɒt/</i>	huì zhì
 point of inflection <i>/pɔɪnt ɒv ɪn'flekʃn/</i>	guǎi diǎn
 polar coordinates <i>/'pəʊlə kəʊ'ɔ:diːnəts/</i>	jí zuò biāo
 polar function <i>/'pəʊlə 'fʌŋkʃn/</i>	jí zuò biāo hán shù
 polar grid <i>/'pəʊlə grɪd/</i>	jí zuò biāo wǎng gé
pole <i>/pəʊl/</i>	jí diǎn
x^2 polynomial <i>/ˌpɒlɪ'nəʊmɪəl/</i>	duō xiàng shì
x^2 polynomial function <i>/ˌpɒlɪ'nəʊmɪəl 'fʌŋkʃn/</i>	duō xiàng shì hán shù
 polynomial long division <i>/ˌpɒlɪ'nəʊmɪəl lɒŋ dɪ'vɪʒn/</i>	duō xiàng shì zhǎng chú fǎ
polynomial model	duō xiàng shì mó xíng

English	Pinyin
position vector <i>/pə'zɪʃn 'vektə/</i>	wèi zhì xiàng liàng
positive <i>/'pɒzɪtɪv/</i>	zhèng shù
 power rule <i>/'paʊə ru:l/</i>	mì fǎ zé
powers	mì
probability <i>/ˌprɒbə'bɪlɪti/</i>	gài lǜ
 product rule <i>/'prɒdʌkt ru:l/</i>	chéng fǎ fǎ zé
properties of exponents	zhǐ shù yùn suàn fǎ zé
 proportional <i>/prə'pɔːʃnəl/</i>	chéng bǐ lì
 Pythagorean identity <i>/'paɪθəɡɔːrɪən aɪ'dentɪti/</i>	gōu gǔ héng děng shì
 quadrant <i>/'kwɒdrənt/</i>	xiàng xiàn
 quadratic <i>/kwɒ'drætik/</i>	èr cì
 quadratic function <i>/kwɒ'drætik 'fʌŋkʃn/</i>	èr cì hán shù
 quadratic model <i>/kwɒ'drætik 'mɒdl/</i>	èr cì mó xíng
 quotient <i>/'kwɒʃənt/</i>	shāng
 quotient rule <i>/'kwɒʃənt ru:l/</i>	chú fǎ fǎ zé
 radian <i>/'reɪdiən/</i>	hú dù
radius <i>/'reɪdiəs/</i>	bàn jìng
 range <i>/reɪndʒ/</i>	zhí yù
 rate of change <i>/reɪt ɒv tʃeɪndʒ/</i>	biàn huà lǜ
ratio <i>/'reɪʃiəʊ/</i>	bǐ zhí

English	Pinyin
$\div$ rational function <i>/ˈræʃənl ˈfʌŋkʃn/</i>	yǒu lǐ hán shù
rational model	yǒu lǐ mó xíng
$\div$ reciprocals <i>/rɪˈsɪprəklz/</i>	dào shǔ
rectangular	zhí jiǎo zuò biāo
rectangular coordinates	zhí jiǎo zuò biāo
$\updownarrow$ recursive <i>/rɪˈkɜːsɪv/</i>	dì guī
reference angle	cān kǎo jiǎo
$\left[\cdot \right]$ reflection <i>/rɪˈflekʃn/</i>	fǎn shè
% remainder <i>/rɪˈmeɪndə/</i>	yú shù
$\circ$ removable discontinuity <i>/rɪˈmuːvəbl dɪskɒntɪˈnjuːti/</i>	kě qù jiàn duàn diǎn
$\updownarrow$ residual <i>/rɪˈsɪdʒuːəl/</i>	cán chà
⌚ residual plot <i>/rɪˈsɪdʒuːəl plɒt/</i>	cán chà tú
restricting	xiàn zhì
right <i>/raɪt/</i>	yòu
$\sqrt{\quad}$ root <i>/ruːt/</i>	gēn
⌘ rose <i>/rəʊz/</i>	méi guī xiàn
rotation <i>/rəʊˈteɪʃn/</i>	xuán zhuǎn
rows	xíng
# scalar <i>/ˈskeɪlə/</i>	biāo liàng
$\wedge$ secant <i>/ˈsiːkənt/</i>	zhèng gē
$\text{—} \circ \text{—}$ secant line <i>/ˈsiːkənt laɪn/</i>	gē xiàn

English	Pinyin
second difference	èr jiē chā fēn
 semi-log plot <i>/ˈsemi lɒɡ plɒt/</i>	bàn duì shù tú
 sequence <i>/ˈsiːkwəns/</i>	shù liè
sign	fú hào
 sine <i>/saɪn/</i>	zhèng xián
 sinusoidal function <i>/ˌsaɪnəˈsɔɪdl ˈfʌŋkʃn/</i>	zhèng xián xíng hán shù
 sinusoidal model <i>/ˌsaɪnəˈsɔɪdl ˈmɒdl/</i>	zhèng xián xíng mó xíng
 sinusoidal regression <i>/ˌsaɪnəˈsɔɪdl rɪˈɡreʃn/</i>	zhèng xián xíng huí guī
sketch	cǎo huì
 slant asymptote <i>/slænt ˈæsmptəʊt/</i>	xié jiàn jìn xiàn
 slope <i>/sləʊp/</i>	xié lǚ
slope of the secant line	gē xiàn
speed <i>/spiːd/</i>	sù dù
standard form <i>/ˈstændəd fɔːm/</i>	biāo zhǔn xíng shì
 standard position <i>/ˈstændəd pəˈzɪʃn/</i>	biāo zhǔn wèi zhì
 state <i>/steɪt/</i>	zhuàng tài
 state vector <i>/steɪt ˈvektə/</i>	zhuàng tài xiàng liàng
straight line	zhí xiàn
substitute <i>/ˈsʌbstɪtjuːt/</i>	dài rù
sum and difference identities	hé chà héng děng shì
 sum identities <i>/sʌm aɪˈdentɪtiz/</i>	hé jiǎo gōng shì

English	Pinyin
Symmetry <i>/ˈsɪmətri/</i>	duì chèn xìng
system of linear equations	xiàn xìng fāng chéng zǔ
 tangent <i>/ˈtændʒənt/</i>	zhèng qiē
tangent line <i>/ˈtændʒənt laɪn/</i>	qiè xiàn
technology <i>/tekˈnɒlədʒi/</i>	jì shù
terms <i>/tɜːmz/</i>	xiàng
time <i>/taɪm/</i>	shí jiān
toward	kào jìn
transform <i>/trænsˈfɔːm/</i>	biàn huàn
 transformation <i>/trænsfɔːˈmeɪʃn/</i>	biàn huàn
 transition matrix <i>/trænˈsɪʃn ˈmeɪtriks/</i>	zhuǎn yí jǔ zhèn
 Translations <i>/trænˈsleɪʃnz/</i>	píng yí
trigonometric equation <i>/ˌtrɪɡənəvˈmetrɪk ɪˈkweɪʒn/</i>	sān jiǎo fāng chéng
 unit circle <i>/ˈjuːnɪt ˈsɜːkl/</i>	dān wèi yuán
units <i>/ˈjuːnɪts/</i>	dān wèi
 vector <i>/ˈvektə/</i>	xiàng liàng
 vector-valued function <i>/ˈvektə ˈvæljuːd ˈfʌŋkʃn/</i>	xiàng liàng zhí hán shù
velocity <i>/vəˈlɒsɪti/</i>	sù dù shǐ liàng
Verify	yàn zhèng
vertex <i>/ˈvɜːteks/</i>	dǐng diǎn

English	Pinyin
vertex form	dǐng diǎn shì
vertical	shù zhí
$\langle \rangle$ vertical asymptote	shù zhí jiàn jìn xiàn
vertical line test	shù zhí xiàn jiǎn yàn
vertical shift	shù zhí píng yí
vertical stretch	shù zhí shēn suō
$\oplus$ zero	líng diǎn